What is claimed is:

1. A phase detection device, comprising:

a first phase detector having a first detecting section for detecting a phase of an object, and a first binarization section for binarizing the phase which said first detecting section has detected by setting hysteresis;

a second phase detector having a second detecting section for detecting a phase of the object in a phase different from said first phase detector, and a second binarization section for binarizing the phase which said second detecting section has detected by setting the hysteresis;

a power supply section having an always energized mode for always supplying a power to said first phase detector and said second phase detector, and an intermittent energized mode for intermittently supplying the power to said first phase detector and said second phase detector; and

a control section for, in said always energized mode, when detection phases of said first phase detector and/or said second phase detector do not change for more than a predetermined time, making the power supply section shift to said intermittent energized mode, and in said intermittent energized mode, storing the detection phases of said first phase

detector and said second phase detector just before shifting to said intermittent energized mode from said always energized mode, and when both the detection phases of said first phase detector and said second phase detector change from the stored detection phases of said first phase detector and said second phase detector, changing the power supply section from said intermittent energized mode to said always energized mode.

2. A phase detection device according to claim 1, characterized in that said control section comprises:

a first exclusive OR gate for receiving a stored detection phase of said first phase detector, and a phase which said first phase detector outputs;

a second exclusive OR gate for receiving a stored detection phase of said second phase detector and a phase which said second phase detector outputs; and

an AND gate for receiving an output signal of said first exclusive OR gate and an output signal of said second exclusive OR gate, wherein

in said intermittent energized mode, when said AND gate outputs a signal indicating that both detection phases of said first phase detector and said

second phase detector have changed, the power supply section is changed from said intermittent energized mode to said always energized mode.

3. A phase detection device according to claim 2, characterized in comprising:

a first memory section for storing the phase which said first phase detector outputs, using a sleep signal indicating said intermittent energized mode as a trigger input;

a second memory section for storing the phase which said first phase detector outputs, using a scanning signal outputted when said power supply section intermittently supplies the power in said intermittent energized mode as a trigger input;

a third memory section for storing the phase which said second phase detector outputs, using said sleep signal as a trigger input; and

a fourth memory section for storing the phase which said second phase detector outputs, using said scanning signal as a trigger input, wherein

said first exclusive OR gate receives an output signal of said first memory section and an output signal of said second memory section; and said second exclusive OR gate receives an output signal of said third memory section and an output signal of said

fourth memory section.

4. A phase detection device according to claim 1, characterized in that said first phase detector and said second phase detector detect magnetic flux, magnetic fields, or changes therein.

5. A dial type detection device, characterized in comprising a phase detection device according to claims 1.

6. A phase detection device, comprising:

a first phase detector having a first detecting section for detecting a phase of an object, a first binarization section for binarizing the phase by receiving the phase which said first detecting section detects and by feeding back a signal which a fifth memory section stores for setting hysteresis, and said fifth memory section for storing an output signal of said first binarization section;

a second phase detector having a second detecting section for detecting a phase of the object in a phase different from said first phase detector, a second binarization section for binarizing the phase by receiving the phase which said second detecting section detects and by feeding back a signal which a

sixth memory section stores for setting hysteresis, and said sixth memory section for storing an output signal of said second binarization section;

a power supply section having an always energized mode for always supplying a power to said first detecting section and said second detecting section, and an intermittent energized mode for intermittently supplying the power to said first phase detecting section and said second phase detecting section; and

a control section for, in said always energized mode, when detection phases of said first phase detector and said second phase detector do not change for more than a predetermined time, making the power supply section shift to said intermittent energized mode, and in said intermittent energized mode, storing the detection phases of said first phase detector and said second phase detector just before shifting to said intermittent energized mode from said always energized mode, and when at least either of detection phases of said first phase detector and said second phase detector changes from the stored detection phases of said first phase detector and said second phase detector, changing the power supply section from said intermittent energized mode to said always energized mode.

7. A phase detection method, comprising:

an always energized mode having a first phase detection step for detecting a phase of an object by always supplying a power to a first detector, and binarizing the detected phase by setting hysteresis, and a second phase detection step for detecting a phase of the object in a phase different from said first phase detection step by always supplying the power to a second detector, and binarizing the detected phase by setting hysteresis; and

an intermittent energized mode having a first phase detection step for detecting a phase of the object by intermittently supplying the power to the first detecting section, and binarizing the detected phase by setting hysteresis, and a second phase detection step for detecting a phase of the object in a phase different from said first phase detection step by intermittently supplying the power to a second detecting section, and binarizing the detected phase by setting hysteresis, wherein

in said always energized mode, when detection phases of said first phase detector and said second phase detector do not change for more than a predetermined time, shift to said intermittent

energized mode occurs, and in said intermittent energized mode, the detection phases of said first phase detector and said second phase detector just before shifting to said intermittent energized mode from said always energized mode are stored, and when both the detection phases of said first phase detector and said second phase detector change from the stored detection phases of said first phase detector and said second phase detector, change from said intermittent energized mode to said always energized mode occurs.